



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,732	04/03/2002	Tino Kirschner	ZAHFRI P437US	2713
20210	7590	10/03/2003	EXAMINER	
DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151			HO, HA DINH	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/089,732

Applicant(s)

KIRSCHNER, TINO

Examiner

Ha D. Ho

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 12,14-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12,14-18 and 22 is/are rejected.
- 7) ☒ Claim(s) 19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Exhibits 1 and 2*.

### **DETAILED ACTION**

1. This Office Action is responsive to Applicant's Amendment filed on 8/25/03. Claims 12, 14-16, 19 and 22 have been amended, and claims 13 and 21 have been canceled accordingly.

Claims 12, 14-20 and 22 are currently pending.

2. The allowable indicating of claim 16 is withdrawn because claim 16 has been amended by the Amendment filed on 8/25/03.

#### ***Claim Objections***

3. Claim 12 is objected to because of the following informalities:

Claim 12, line 12, "thaen" should be changed to --than-- (note that "e" has never had in the claim).

Claim 12, line 14, "outside" should be deleted.

Claim 12, line 15, "an" should be deleted.

Claim 12, line 15, "with" should be deleted.

Claim 12, line 16, "reduced" should be deleted.

Claim 12, line 16, "compared to then" should be changed to --than--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3681

5. Claims 12, 14 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Friedrich (DE 4241550).

Regarding claim 12, Friedrich' 550 teaches a planetary gear having planetary wheels (4) fitted in a rotating planetary carrier that forms an output (5), a sun gear (A) (see Exhibit 1), an annular gear (2a), a housing (2), a rotating sun gear shaft (B including sections colored in yellow, green and red, see Exhibit 1) having a hollow receiving area (C which is colored in red, see Exhibit 1) to receive an output shaft (26) of an electromotor, a sealing element (16) provided between the sun gear shaft (B) and the housing, wherein the sealing element (16) is axially spaced from the receiving area (C) and located on a first axial section of the sun gear shaft (i.e., the section colored in green) having a smaller outer diameter than a diameter of the receiving area (C), and a bearing (D) (see Exhibit 1) for the sun gear shaft (B), whose inner ring is axially spaced from the receiving area (C) on a second axial section of the sun gear shaft (i.e., the section colored in yellow) having a smaller outer diameter than the receiving area (C).

Regarding claim 14, the outer ring of the bearing (D) is positioned in the planetary carrier.

Regarding claim 22, wherein the diameter of a functional surface (i.e., the surface of the section colored in green, see Exhibit 1) of the sun gear shaft (B) is smaller than the diameter of the bore (i.e., the bore inside the section colored in red) in the receiving area (C) (see Exhibit 1).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3681

7. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedrich (DE 4241550) in view of Fritsch (US 3,315,547).

Friedrich'550 shows the bearing (D) for the sun gear shaft located radially and axially outside, not radially inside and axially at least partly within, the space occupied by a planetary carrier bearing (E) (see Exhibit 1). Fritsch'547 shows a planetary gear (see Fig. 1) having a bearing (G) (see Exhibit 2) for the sun gear shaft (11) located radially inside and axially at least partly within the space occupied by an inner ring of a planetary carrier bearing (H) (see Exhibit 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to relocate the bearing for the sun gear shaft of Friedrich'550 such that it is located radially inside and axially at least partly within the inner ring of the planetary carrier bearing as shown by Fritsch'547, since shifting the bearing for the sun gear shaft to a different position would not modify the operation of the device. The courts have held that shifting location of parts would have been an obvious expedient (*In re Japikse*, 86 USPQ 70 (CCPA 1950)).

Regarding claim 16, Friedrich'550 shows the carrier having through bores (I) (see Exhibit 1), a planetary bearing pin (6), and an end face of the planetary bearing pin (6) being axially limited between opposing inner bearing rings of planetary carrier bearings (E, 14), whereby the planetary bearing pin is secured against axial displacement.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friedrich (DE 4241550) in view of Bayer (DE 19821813).

Friedrich'550 shows the bearing (D) for the sun gear shaft fitting into the carrier without a circlip received in a groove. Bayer'813 shows a planetary gear having the bearing (4) and the

Art Unit: 3681

circlip received in the groove (see Fig. 1). The circlip is for keeping the bearing from axially movement. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a groove on the carrier of Friedrich'550 and provide a circlip received in the groove in view of Bayer'813 in order to keep the bearing from axially movement.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friedrich (DE 4241550) in view of Bayer (DE 19821813) as applied to claim 17 above, and further in view of Gotman (US 4,991,473).

The combination of Friedrich'550 and Bayer'813 does not show an elastic element for compensating the axially displacement of the sun gear shaft. Gotman'473 shows a planetary gear (40) having planet gears (42) meshing with the ring gear (41) and the sun gear (38), wherein the sun gear shaft (37) is mounted so that it can be axially displaced against the restoring force action of an elastic compensating element (62). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the combination of Friedrich'550 and Bayer'813 to have an elastic element for compensating the axially displacement of the sun gear shaft as taught by Gotman'473 in order to reduce the vibration in the planetary gear.

***Allowable Subject Matter***

10. Claims 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3681

11. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose or render obvious a motivation to provide for a planetary gear including the axial compensating element positioned in a particular position as required by claim 19.

***Response to Arguments***

12. Applicant's arguments filed on 8/25/03 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies, i.e., the receiving section is designed to directly receive the shaft of the electromotor (Applicant's Amendment, page 4, last paragraph) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant also argues (see page 5, second paragraph) that (1) both the seal 16 and the bearing 14 are axially adjacent, not axially spaced from, the receiving area of the sun gear shaft 26 (it is assumed that applicant meant "the sun gear shaft B", not 26, as interpreted by examiner); and (2) both the seal 16 and the bearing 14 respectively seal and support the sun gear shaft at a larger diameter portion of the sun gear (it is assumed that applicant meant "the sun gear shaft", not the sun gear, as recited in claim 12) than the receiving area, not a smaller diameter as recited in claim 9 (it is assumed that applicant meant "claim 12" not claim 9).

Examiner disagrees because (1) it can be seen clearly that the seal 16 is spaced from the receiving area C, which is colored in red, by a gap F (see Exhibit 1), and the bearing D is also

Art Unit: 3681

spaced from the receiving area C (note that the limitation of “at least one bearing for the sun gear shaft” recited in claim 12 is interpreted as the bearing D, not the bearing 14 as applicant stated in his argument); and (2) referring to the Exhibit 1, the outer diameter of the first axial section of the sun gear shaft, i.e., the section colored in green, where the sealing element 16 is located on, and the outer diameter of the second axial section of the sun gear shaft, i.e., the section colored in yellow, where the inner ring of the bearing D is located on, are much smaller than a diameter (either inner or outer diameters) of the receiving area C, which is colored in red.

### ***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Communication***

14. Submission of your response by facsimile transmission is encouraged. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly



Art Unit: 3681

in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see M.P.E.P. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check. Responses submitted by facsimile transmission should include a Certificate of Transmission (M.P.E.P. 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to  
the Patent and Trademark Office on \_\_\_\_\_  
(Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_  
\_\_\_\_\_  
(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.P.E.P. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Examiner Ho whose telephone number is (703) 305-0738. The examiner can normally be reached on Monday-Friday from 7:30 A.M. to 5:00 P.M. Eastern Standard Time. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Mr. Charles Marmor, can be reached at (703) 308-0830. Any inquiry of a general nature or relating to the status of this application or proceeding should directed to the Group receptionist whose telephone number is (703) 308-2168.

Ha Ho 10/01/03

Ha Ho  
Patent Examiner  
Art Unit 3681